

S/N: 10/667,420
Art Unit: 2636

Page 2 of 13

31-May-05
Atty. Dkt. 26/562

AMENDMENTS TO THE CLAIMS

The following is a complete listing of the claims indicating the current status of each claim and including amendments currently entered as highlighted.

1. (currently amended) An aircraft weapon system for operation by a user located within a cockpit, the system comprising:

(a) a weapon system including a missile launcher and a missile mounted to said missile launcher, said missile having a target seeker;

(b) a cuing system including:

(i) a helmet worn by the user,

(ii) a helmet position measurement system for measuring a position of said helmet relative to at least part of the aircraft, and

(iii) a first portion of a wireless communication link, said first portion being including a wireless transmitter located within the cockpit for communicating cuing direction information derived at least in part from said position measurement system,

said cuing system being operable by the user to generate:

(i) a wireless cuing signal indicative of a cuing direction selected by the user, and

(ii) a wireless target designation signal indicative of designation of a target in a current cuing direction; and

(c) a weapon system controller operationally linked to said target seeker and said missile launcher, said weapon system controller including a second portion of said wireless communication link and being:

S/N: 10/667,420
Art Unit: 2636

Page 3 of 13

31-May-05
Atty. Dkt. 26/562

- (i) responsive to said wireless cuing direction signal to direct said seeker in a corresponding cuing direction, and
- (ii) responsive to said wireless target designation signal to release said seeker to track a target.

2. (original) The weapon system of claim 1, wherein said cuing system is further operable by a user to generate a wireless fire signal for firing said missile, and wherein said weapon system controller is responsive to said wireless firing signal to activate said missile launcher to launch said missile.

3. (canceled)

4. (previously presented) The weapon system of claim 1, wherein said cuing system further includes:

- (a) an at least partially helmet-mounted system for deriving an eye gaze direction for at least one eye of the user relative to said helmet; and
- (b) a processing system operative to combine said eye gaze direction and said position to determine a direction of eye gaze relative to at least part of the aircraft.

5. (original) The weapon system of claim 4, wherein said weapon system controller is further configured to monitor a current tracking direction of said seeker and to transmit a wireless tracking direction signal indicative of said current tracking direction.

S/N: 10/667,420
Art Unit: 2636

Page 4 of 13

31-May-05
Atty. Dkt. 26/562

6. (original) The weapon system of claim 5, wherein said cuing system is further configured to:

- (a) determine from said wireless tracking direction signal said current tracking direction;
- (b) compare said current tracking direction with said direction of eye gaze relative to at least part of the aircraft; and
- (c) when said current tracking direction and said direction of eye gaze are equal within a given degree of accuracy, generate an audible confirmation.

7. (original) The weapon system of claim 1, wherein said weapon system controller is further configured to monitor a current tracking direction of said seeker and to transmit a wireless tracking direction signal indicative of said current tracking direction, and wherein said cuing system is further configured to:

- (a) determine from said wireless tracking direction signal said current tracking direction;
- (b) compare said current tracking direction with a cuing direction currently selected by the user; and
- (c) when said current tracking direction and said currently selected cuing direction are equal within a given degree of accuracy, generate an audible confirmation.

8. (original) A method for providing a user with information associated with at least one region of a field of view visible to the user without requiring a visual display, the method comprising the steps of:

S/N: 10/667,420
Art Unit: 2636

Page 5 of 13

31-May-05
Atty. Dkt. 26/562

- (a) determining an eye gaze vector in a geo-stationary frame of reference for at least one eye of the user by:
 - (i) employing an at least partially helmet-mounted system to derive direction information indicative of an eye gaze direction for at least one eye of the user relative to a helmet worn by the user,
 - (ii) deriving position information indicative of a position of said helmet in the geo-stationary frame of reference, and
 - (iii) processing said direction information and said position information to derive said eye gaze vector in the geo-stationary frame of reference;
- (b) retrieving from an information system information relating to at least one element visible to the user along said eye gaze vector; and
- (c) generating audio output audible to the user and indicative of said information.

9. (original) The method of claim 8, wherein said deriving position information includes:

- (a) deriving a position of said helmet relative to a moving platform; and
- (b) determining a position of said moving platform in the geo-stationary frame of reference.

10. (original) The method of claim 9, wherein said moving platform is an aircraft.

S/N: 10/667,420
Art Unit 2636

Page 6 of 13

31-May-05
Atty. Dkt. 26/562

11. (original) The method of claim 8, wherein said information includes an indication that an aircraft visible to the user along said eye gaze vector is a friendly aircraft.

12. (original) The method of claim 8, wherein said information includes an indication that an aircraft visible to the user along said eye gaze vector is a hostile aircraft.

13. (original) The method of claim 8, wherein said information includes information relating to a landmark visible to the user along said eye gaze vector.

14. (previously presented) A method for providing a pilot with information associated with at least one region of a field of view visible to the pilot from within a cockpit without requiring a visual display, the method comprising the steps of:

- (a) determining relative to a given frame of reference a cuing direction currently designated by a cuing system operated by the pilot, said cuing system being at least partially helmet-mounted;
- (b) determining a reference direction relative to said given frame of reference;
- (c) comparing said cuing direction with said reference direction; and
- (d) generating, only when said cuing direction and said reference direction are equal to within a given degree of accuracy, an audio output audible to the pilot and indicative of information associated with said reference direction.

S/N: 10/667,420
Art Unit: 2636

Page 7 of 13

31-May-05
Atty. Dkt. 26/562

15. (original) The method of claim 14, wherein said reference direction corresponds to a direction from a weapon system to a target to which the weapon system is locked-on, such that said audio output provides confirmation that the weapon system is locked-on to a target located in the currently designated cuing direction.

16. (original) The method of claim 14, wherein said reference direction corresponds to a direction from the cockpit to a friendly aircraft, such that said audio output provides an indication that an aircraft located in the currently designated cuing direction is friendly.

17. (original) The method of claim 14, wherein said reference direction corresponds to a direction from the cockpit to a hostile aircraft, such that said audio output provides an indication that an aircraft located in the currently designated cuing direction is hostile.

18. (original) The method of claim 14, wherein said reference direction corresponds to a direction from the cockpit to a landmark, such that said audio output provides information relating to the landmark located in the currently designated cuing direction.

19. (previously presented) A cuing-system-actuated information system for providing a pilot with information associated with at least one region of a field of view visible to the pilot from within a cockpit without requiring a visual display, the system comprising:

S/N: 10/667,420
Art Unit: 2636

Page 8 of 13

31-May-05
Atty. Dkt. 26/562

- (a) a cuing system operable by the pilot to designate a current cuing direction relative to a given frame of reference, at least part of said cuing system being helmet-mounted;
- (b) a direction correlation system associated with said cuing system and configured to compare said current cuing direction with at least one reference direction and to generate a correlation signal when said current cuing direction is equal to said reference direction within a predefined margin of error; and
- (c) an audio output system associated with said direction correlation system and configured to be responsive to said correlation signal to generate audio output audible to the pilot and indicative of information related to said reference direction,

wherein said direction correlation system and said audio output system are configured such that said audio output indicative of information related to said reference direction is generated only when said current cuing direction is equal to said reference direction within said predefined margin of error.

20. (original) The information system of claim 19, wherein said cuing system includes an at least partially helmet-mounted system for deriving an eye gaze direction for at least one eye of the pilot, said eye gaze direction being used to define said current cuing direction.

21. (original) The information system of claim 19, further comprising a weapon system including a seeker operative to track a target, said weapon system generating a current target direction corresponding to the direction from the seeker to the target being tracked, said direction correlation system being associated with said

S/N: 10/667,420
Art Unit 2636

Page 9 of 13

31-May-05
Atty. Dkt. 26/562

weapon system and configured to employ said current target direction as one of said reference directions such that, when the current cuing direction is aligned with the target, said audio output system generates audio output indicative that the target aligned with the current cuing direction is being tracked.

22. (currently amended) The weapon system of claim 1, wherein said ~~first portion of the wireless communication link includes a wireless transmitter is~~ supported by the body of the user.

23. (currently amended) The weapon system of claim 1, wherein said ~~first portion of the wireless communication link includes a wireless transmitter is~~ mounted at a fixed position within the cockpit.

24. (previously presented)The method of claim 14, wherein said given degree of accuracy is defined by a maximum allowed discrepancy having a value less than 5°.

25. (previously presented)The information system of claim 19, wherein said predefined margin of error is defined by a maximum allowed discrepancy having a value less than 5°.